



POLYMERICA

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POLYMERICA PRODUCT DATA

LevelMaster VNS/SL

Vinyl Ester Novolac
Surfacing/Self-Leveling

PRODUCT PRESENTATION

LevelMaster VNS/SL is a self-leveling chemically resistant surfacing designed for a broad range of severe chemical exposures and high temperatures. **VNS/SL** will protect concrete from wear, impact and chemical attack of strong acids, caustics and solvents.

LevelMaster VNS/SL is installed at a nominal 1/8" to 1/4" thickness, consisting of:

- ➔ a 100% reactive primer
- ➔ a self-leveling vinyl ester novolac surfacer
- ➔ optional aggregates for specified thickness and texture
- ➔ two VNC seal coats

VNS/SL will follow the contour of the slab and is not designed to pitch a surface or bring a surface to level.

FEATURES

- ➔ Excellent chemical resistance to a wide range of chemicals.
- ➔ High temperature performance in many cases up to 350° F (spills) or 450° F (dry heat).
- ➔ Excellent impact resistance.
- ➔ Best overall performance for chemical contaminant areas.
- ➔ Conforms to California Rule 1162.

USES

LevelMaster VNS/SL is used to restore and protect concrete in the most severe chemical environments. **VNS/SL** exhibits excellent resistance to the widest range of chemicals of any polymeric surfacer. This feature makes **VNS/SL** ideal for chemical processing and storage facilities with both primary and secondary containment needs.

LevelMaster VNS/SL is typically used in plating and metal finishing plants; pulp and paper, petroleum and chemical processing plants; power, water and waste treatment facilities.

Floors and walkways subject to constant or intermittent spills or washdowns can be textured for improved footing. Light color or decorative floors are available although they may stain or amber in some exposures.

LIMITATIONS

- ➔ Substrate must be sound, clean, properly prepared, dry and free from hydrostatic pressure.
- ➔ Minimum application temperature is 50° F.
- ➔ Low temperature activators are available for positive cures between 32° and 50° F.
- ➔ Adequate ventilation must be provided during application and cure.
- ➔ Chemical exposure, service temperatures, mechanical abuse and housekeeping influence service life.
- ➔ Liquid components have limited 2 month shelf life.

ESTIMATING & APPLICATION GUIDELINES

| System | Step one | Step two | Step three | Step four |
|--|-----------------------------|--|----------------------------------|---|
| | Primer | Slurry | Broadcast | Seal Coat |
| Smooth | VNB | VNC/SLF | N/A | VNC |
| Textured | VNB | VNC/SLF | BCS, BAO | VNC |
| Decorative | VNB | VNB/SLF | MCB | VNB |
| Mix Ratio | 1 gal. A : 4 oz. B | 1 gal. A: 4 oz. B to 15-20 lb. SLF | N/A | 1 gal. A : 4 oz. B |
| Coverage* | 160 ft ² /gal | 16-24 ft ² @ 1/8"-3/16" | 200-300 ft ² /100# | 85-125 ft ² /gal |
| Requirements per 1000 ft ² * | 6 gal | 40-60 kits | 350-500 lb. | 8-12 kits |
| Pot Life @ 70° F | 20 min. | 45 min. | N/A | 45 min. |
| Cure to next step @ 70° F | 1/2 to 6 hrs. maximum | None to Broadcast. 4 to 6 hrs. to seal. | 4-6 hrs. | 10 to 16 hrs. Full chemical cure 3-5 days |

* coverage and requirements will vary due to conditions of substrate and desired finish and texture.
Reducing SLF in cold temperature will aid flow.

Application

- Preparation:** Concrete must be structurally sound and clean. Preferred method includes abrasive blast or water blast cleaning. An acid etch, rinsed and neutralized, is also acceptable. Dry thoroughly. Before proceeding, **make certain** that the substrate and all mixing vessels and equipment are free of any **epoxy contamination** (cured or uncured) and free of moisture. Consult **POLYMERICA** Bulletin SP-C for complete details.
- Step one:** Mix **VNB A & B** with a low speed drill for 2 minutes. Apply with squeegee, cut in with brush and back-roll with short nap roller. Do not puddle.
- Step two:** Mix **VNC A & B** with low speed drill for one minute. Add **SLF** while continuing to stir. Mix for additional one to two minutes until all material is thoroughly wetted. Pour onto floor in ribbons. Spread with 1/4" v-notch trowel or squeegee or apply with pin screed. Backroll with spiked roller to release air.
- Step three:** Broadcast aggregate or MasterQuartz to excess while slurry is still wet. Allow to cure. Sand if desired. Sweep up excess.
- Step four:** Mix **VNC A & B** with low speed drill for 2 minutes. Apply coating with squeegee, then back-roll with a good quality short nap roller. Repeat if additional coat is required.

PERFORMANCE CHARACTERISTICS

| | |
|--|--------------------------------------|
| Compressive Strength (ASTM C-579) @ 7 days | 12,000 psi |
| Tensile Strength (ASTM C-307) | 1,950 psi |
| Flexural Strength (ASTM C-580) | 2,500 psi |
| Bond Strength (ACI 503R) | 350 psi concrete fails |
| Thermal Coefficient of Expansion (ASTM D-696) | 0.000035 inch per inch per °F |
| Abrasion Resistance (ASTM D-4060) CS-17 wheel, 1 kg load, 1000 rev. | 0.1 gm maximum weight loss |
| Thermal Shock Resistance (ASTM C-884) | passes |
| Water Absorption (ASTM C-413) | 0.1% |
| Flammability (ASTM D-635) | Self-extinguishing |
| Impact Resistance (MIL-D-3134F) | 16 foot-pounds concrete fractures |
| Indentation (MIL-D-3134F) | No indentation |

CHEMICAL RESISTANCE

| Reagent | Rating | Reagent | Rating |
|-----------------------------|---------------|----------------------------|---------------|
| Acetic Acid-75% | R | Lactic Acid | R |
| Acetone | L | Methyl Ethyl Ketone | L |
| Acrylic Acid-25% | R | Nitric Acid-50% | R |
| Citric Acid | R | Phenol | L |
| Chromic Acid-20% | R | Sodium Hydroxide-50% | R |
| Diesel Fuel | R | Sulfuric Acid-70% | R |
| Ethylene Glycol | R | Toluene | R |
| Fatty Acids | R | Urea | R |
| Gasoline | R | Vinegar | R |
| Hydrochloric Acid-37% | R | Xylene | R |

R - Recommended for continuous service.
L - Limited recommendation, occasional spills.

This chart is intended as an aid in evaluating the performance of these systems in various chemical exposures at 75° F. The data is intended as a guide only. In severe or combination exposures, a sample should be tested under actual or simulated use conditions.

Product data is revised as needed to reflect the most recent technology and field experience. Consult **POLYMERICA** for current printing date of literature.

CARE AND MAINTENANCE

LevelMaster Floors must be protected from traffic, chemicals and abuse during the cure process.

Newly installed floors should be cured a minimum of 18 hours at 65°F before washdowns. Only warm water should be used to clean within the first week. If use of a detergent is necessary in the first week, use only a NON-CHLORINE cleaner dissolved in water. Sanitizing detergents containing chlorine or hypochlorite should not be used for at least 7 days.

Good housekeeping practices and regulated spill removal will prolong the service life of the floor. **LevelMaster Floors** are not self-cleaning nor always non-staining. The following cleaning procedures are recommended weekly or as needed:

- ➔ Spills must be removed and rinsed at the first opportunity.
- ➔ Sweep or vacuum loose dirt and debris.
- ➔ Use an industrial detergent, dissolved in water as directed by the manufacturer.
- ➔ Power scrub surface, then rinse with a pressure washer.
- ➔ Remove rinse water with a wet vacuum or a squeegee.
- ➔ Conventional methods are also acceptable for small areas.

COLORS

Solid colors: Sabre gray, Brick red.
Decorative: Eight standard blends.
See color card.

Custom colors or other **MasterShield** colors are available with restrictions.

SAFETY

Material Safety Data Sheets are available from **POLYMERICA** and should be consulted prior to use of the product. These products are intended for use by professionals only. Keep away from children and those not trained in the use and potential hazards involved.

MasterShield VNB and VNC contain vinyl ester resins and styrene. They are cured with an organic peroxide catalyst. Both components are flammable. Keep away from all sources of ignition. Provide NIOSH approved respirators AND forced ventilation in confined spaces. Workers should wear goggles, gloves and body covering clothing when mixing or applying product. **LevelMaster Fillers** contain silica which may cause delayed lung damage. Dust masks should be worn when mixing. Clean up with waterless hand cleaners. Do not use solvents except for equipment in necessary. Be sure to follow all label and MSDS cautions.

WARRANTY

POLYMERICA warrants its products to conform to its manufacturing standards. **POLYMERICA** will replace or refund the purchase price of non-conforming product at the seller's option; such remedy being exclusive of all others and sole remedy available to the buyer. Buyer hereby expressly waives claim to additional damages. Any claim under this warranty must be made in writing within 7 days of discovery of non-compliance and no later than one year from the date of delivery of product. No representative, distributor or applicator of these products is authorized to modify product data or warranty.

IMPORTANT NOTICE

These products are sold subject only to the express warranties contained herein. There are no other warranties by **POLYMERICA** of any nature whatsoever, expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. Buyer agrees that seller assumes no liability for remote or consequential damages of any kind which result from the use or misuse of this product. Information contained herein is based on data believed to be reliable, however, it is the Buyer's responsibility to satisfy itself of the suitability of the product for a particular purpose.

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